

Claims

What is claimed is:

1. (Currently Amended) A method for non-invasive excitation of specific brain neurons, comprising:

~~by projecting a power beam using electromagnetic brain animation, a combination of electromagnetic radiation electricity, magnetism and ultrasound pulses, initiated from multiple size and shape coils incased inside and outside an adaptable "Cap" like apparatus made of hard elastic, rubber or any common thermoplastic resin non-conductive to electricity targeting on to a specific area[s] of a the brain that is are known to impact[/] or result in precise emotional and/or mental difficulties;~~

wherein the ultrasound pulses are initiated from a cap configured to conform to a human head;

wherein the electromagnetic radiation is initiated from a plurality of coils connected to the cap; and

wherein the combination of electromagnetic radiation and ultrasound induce thereby inducing cell or neuron depolarization for the purpose of cognitive function, enhancement, habilitation, rehabilitation, and/or redirection of said abnormal mental difficulties.

2. (Currently Amended) An apparatus for inducing neuron depolarization, comprising:

a cap instrument configured to be placed in physical proximity to a human head, the cap instrument comprising:

a plurality of coils arranged in rows on the cap configured to emit electromagnetic radiation when energized with electric current; and

a plurality of hydraulically adjustable prongs connected to the cap for adjusting the distance of the coils from the head for focusing the electromagnetic radiation into the head when the cap is worn by the head.

~~A method and construction formulation is set forth whereas a "CAP" like encasement is the dominant physicality of the instrumentation is utilized for complete inclusion of all conduction/coil points, up to 100, located within (inside), situated evenly through scope of "cap", front to brows, back to nape of neck, sides to top of ears, to hover over and around head of patient whereas all coils will be elevated approximately one half to three quarters inch from cranium, held aloft and fixed by thin prong like padded sturdy flexible elongations which can be hydraulically lengthened from' one half inch to twelve [12] inches producing significant variations in distance from skull during treatment, resulting in ability to specifically target coil transmission focus onto as small as 1 centimeters.~~

3. (Currently Amended) A method for stimulating multiple specific areas of ~~a the brain with electromagnetic radiation by a plurality of induction coils arranged statically around the brain individual separate induction and/or multi formulated mass infiltration with coil target initiation points from 1 to 100), with the innovative ability to utilize comprising guiding the electromagnetic radiation via a tube formed beam of ultrasound operated as a guiding system sent into and through a the skull casing directly upon the soft mucus tissue of the cerebral cortex of the brain aimed at specific neuron clusters relevant to a particular mental disorder being treated.~~

4. (Currently Amended) A method of causing neuron depolarization for ameliorating the effects of a mental disorder, comprising:

selecting an area of a brain to stimulate with electromagnetic radiation;

plurality of coils, wherein:

the electromagnetic radiation is emitted in pulses in a frequency with a lower range of 20 Hz;

the electromagnetic radiation is powered by a battery having a voltage rating from between 9 and 12 volts;

the coils vary in size and shape;

the coils are selectively activated, each producing an electromagnetic field for producing an combined electromagnetic radiation field at the selected area of the brain that targets the selected area.

A method of impact integration of "animation" brain organ locale via electromagnetic brain animation pertaining to permeation of chosen brain cells by composite amalgamation as in multiple coil inductions with lower pulse [down to 20 per second] and power scales [9-12V Battery] numerous locales [up to 100] frequent variations, varied distance, rotating transmission and multiple combined correlations allowing coverage of larger areas with lesser number of combined coil inductions resulting in dynamic energy having the capacity to adroitly assist or coax a more temperate influence on neuron cellular target producing a supple, resilient, elastic, more acceptable animation that allows a significantly higher control of induction beam resulting in outcome of a greater percentage of successful rehabilitation not previously attained due to the currently utilized sharper, irregular stimulation which has a precedent of being inaccurate as well as aggravating the cellular target.

5. (Currently Amended) An apparatus for inducing neuron depolarization, comprising:

a cap instrument configured to be placed in physical proximity to a human head, the cap instrument comprising:

a plurality of coils arranged in rows on the cap configured to emit

electromagnetic radiation when energized with electric current; and

wherein the coils comprise:

a double eight shape coil;

a quadruple eight coil;

a dumbbell coil;

a triple circle bar coil;

a double squared triangle coil;

a pentagon shaped coil;

wherein the coils are configured to be individually energized for producing different electromagnetic fields depending on which combination of coils are energized.

A method of coils varying in shapes from "double eight" to "quadruple eight" to "dumbbell" to "triple circle bar" to "double squared triangle" to "pentagon shaped and pentagon shaped with one or more cross core encasements as well as numerous other uncharacteristic forms and/or contours in architectural correlation with the fact that "shape of field is largely determined by shape of coil, which allow numerous original EBA formulations resulting in a higher percentage of success because the shape of a coil largely determines the shape of the electromagnetic induction beam and each additionally different induction shape directly correlates to a higher potential for positive results in neuron reorganization due to exponentially enhanced depolarization opportunities.

6. – 7. (Canceled)

8. (Currently Amended) A method of determining operating parameters of an apparatus for causing neuron depolarization for ameliorating the effects of a mental disorder, the apparatus comprising:

a cap instrument configured to be placed in physical proximity to a human head,
the cap instrument comprising:

a plurality of coils arranged in rows on the cap configured to emit a rate of pulses of a electromagnetic radiation when energized with electric current,
wherein the pulses have a pulse frequency; and
an adjustment mechanism connected to the cap for adjusting the distance of the coils from the head for focusing the electromagnetic radiation into the head when the cap is worn by the head;

wherein the coils are directly connected to control modules for independently controlling each coil;

wherein the method comprises:

varying the coil configuration;

varying power to the coils;

varying conductor position above and over the head;

varying the pulse rate from one pulse every 0.10 to 0.50 seconds to 3 pulses every 0.10 to 0.50 seconds;

varying the pulse frequency from 1Hz to 10Hz;

directing the electromagnetic radiation through a volume of an ultrasound guidance tube onto a target in a brain; and

observing a patient receiving the radiation.

A method is set forth whereas an innovative "EBA mapping" is performed by changing coil, power and conductor position above and over the head while observing effects with a separate control panel where all induction capsules within "Cap" are directly connected to individual control modules beaming electromagnetic induction at varying speeds from one pulse every 0.10 to 0.50 seconds to 3 pulses every 0.10 to 0.50 seconds with a frequency range from as low as 1Hz up to 10Hz and a power usage of as low as a 12V Battery directed through an ultrasound guidance tube specifically onto the 1 to 10 centimeter target specified for lower and slower dynamic animation necessary for a particular early childhood diagnostic treatment.

9. – 11. (Canceled)

12. (Currently Amended) A cap instrument configured to be placed in physical proximity to a human head, for causing neuron depolarization for ameliorating the effects of a mental disorder, the apparatus comprising:

the cap instrument comprising:
a plurality of coils arranged in rows on the cap configured to emit a rate of pulses of a electromagnetic radiation when energized with electric current, wherein the pulses have a pulse frequency; and

an adjustment mechanism connected to the cap for adjusting the distance of the coils from the head for focusing the electromagnetic radiation into the head when the cap is worn by the head;

an ultrasound attachment for generating ultrasonically induced electric fields within a brain; and

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wherein instrument is configured to emit pulses with a pulse frequency above 50
Hz.

A method set forth where "ur/EBA" refers to ultra rapid electromagnetic brain animation of above 50 Hz, equals "high frequency EBA" or as in replication pulse rates above 1 Hz, equals "low frequency EBA" or as in replication rates below 1 Hz, and EBA/US is indicative of secondary usage of ultrasound, combined with electromagnetic brain animation and can be indicative of primary or secondary usage of ultrasound induction to target area used as a precursor cell softening instrument or as a combination guiding instrument or as follow up instrumentation used with or without EB indicative of resulting in a significant 65 to 85 percent success rate of noticeable improvement in neuron activity relating directly to reorganization of neuron fusion.

13. – 15. (Cancelled)

16. (Currently Amended) A method for stimulating a specific area of a brain using an induction device, comprising: the following steps of
recording the spatial structure of the ~~head, in particular the brain;~~
generating a live (present time) model of the brain and specific regions via schematic screen combinations of topography, such as MRI, CT, PET, and X-ray; ~~being dedicated to a single master control board in conjunction with electromagnetic brain animation.~~
projecting a combination of electromagnetic radiation and ultrasound pulses on to a specific area of the brain that is known to impact or result in emotional or mental disorders;

wherein the ultrasound pulses are initiated from a cap configured to conform to a human head;

wherein the electromagnetic radiation is initiated from a plurality of coils connected to the cap; and

wherein the combination of electromagnetic radiation and ultrasound induce cell or neuron depolarization for ameliorating mental disorders.

17. – 18. (Canceled)

19. (Currently Amended) The method of claim 1, further comprising configuring the shapes of the coils to target a region of the brain.

~~A method wherein the target region can be any area or section of the cerebral cortex or whole of brain considered relevant to potential electromagnetic brain animation enhancement due to abilities to vary size, mobility, structure, coil and core of coil interchangeable materials and continual mobile capacity to configure shapes of said "Cap" through inclusive instrumentation of main control board.~~

20. (Currently amended) A method for non-invasive excitation of specific brain neurons, comprising:

preconditioning an area of the brain by targeting an ultrasound beam on to the area;

projecting electromagnetic radiation pulses onto the area of the brain that is known to impact or result in emotional or mental disorders, wherein the radiation is emitted in a sequence of pulses, wherein the duration of each pulse in the sequence is less than 10 milliseconds and wherein the pulses in the sequence alternate in polarity; and

post treating the area of the brain with an ultrasound beam;

wherein the combination of electromagnetic radiation and ultrasound induce cell or neuron depolarization for ameliorating mental disorders.

~~A method wherein there is a primary option to include ultrasound as a preconditioning tool of relevant brain area and post utilization tool for slower alleviation of areas initially made more dynamic during electromagnetic brain animation than deemed necessary when formulating time varying electromagnetic fields using a sequence of pulses, wherein the duration of each pulse in the sequence is less than 10 milliseconds and wherein the pulses in the sequence alternate in polarity; subjecting the patient's head to the time varying electromagnetic, ultrasonic field.~~

21. (Currently Amended) An induction coil for generating electromagnetic radiation for causing neuron depolarization in a brain, comprising aa coil in the form of a double-eight.

~~A method as set forth wherein a coil in the form of a double eight is used as the EBA induction device and wherein separate segments of this double eight figured coil contains numerous varied innovative coil core materials including permanent magnet parts, some small air spaces and particles of steel which allows for additional original and multiple shapes, sizes lengths, power, pulsation abilities and directional aptitude due to added multiplicity of core ingredients that also will vary power of force fields which have a specific and direct correlation of induction beam configuration parallel with the exchange of shape, size, length, power, pulsation and aptitude of initial induction coil itself.~~

22. (Cancelled)

23. (Currently Amended) An apparatus for causing neuron depolarization for ameliorating the effects of a mental disorder, the apparatus comprising:

A cap instrument configured to be placed in physical proximity to a human head, for comprising:

a plurality of coils arranged in rows on the cap configured to emit a sequence of pulses of a electromagnetic radiation when energized with electric current, wherein the pulses have a pulse frequency; and

an adjustment mechanism connected to the cap for adjusting the distance of the coils from the head for focusing the electromagnetic radiation into the head when the cap is worn by the head;

an ultrasound attachment for generating ultrasonically induced electric fields within a brain; and A method

wherein the pulse sequences ~~eonsists~~ comprise of a series of waves greater than 1000 amps in electrical current and less than 10,000 amps and the pulse sequences are in the range of 5-50 seconds in duration, wherein ~~the as this original combination results in having each wave between less than 1 millisecond in duration down to 1 tenth of 1 millisecond in duration and the magnetic field produced thereby is at least 1 Tesla [a unit of magnetic induction equal to one unit of magnetic influx per square meter] and with potential for to 3 Tesla resulting in a sequential alliance and goal not achievable up to this time.~~

24. (Currently Amended) The apparatus of claim 2, wherein ~~A method wherein the magnetic induction coils are magnetic induction coils and comprise may be a superconductive coil cooled below its critical temperature and is configured to operate from the "adaptation" modulation may allow extra low Hz and power to emanate, for the first time, from an independent power sources as small as a 9V battery which results in~~

~~multiple advantages related to locale of treatment, numbers being treated and~~

~~considerable alleviation of power resulting in lower cost per treatment ratio.~~

25. (Currently Amended) An apparatus for causing neuron depolarization for ameliorating the effects of a mental disorder, the apparatus comprising:

A cap instrument configured to be placed in physical proximity to a human head, for comprising:

a plurality of coils arranged in rows on the cap configured to emit a sequence of pulses of a electromagnetic radiation when energized with electric current, wherein the pulses have a pulse frequency; and

an adjustment mechanism connected to the cap for adjusting the distance of the coils from the head for focusing the electromagnetic radiation into the head when the cap is worn by the head;

an ultrasound attachment for generating ultrasonically induced electric fields within a brain; and

wherein the pulses range from 5 seconds to 50 seconds in duration, and have a frequency that ranges from 10Hz to 100Hz.

~~A pioneering method brought about due to the numerous original size, shape and mobility of the primary "cap" configuration in conjunction with the comparatively limitless differentiations pertaining to powers, coils, materials, shapes, sizes, directional aptitudes, and varying power sources, both self contained and otherwise wherein the 'electromagnetic brain animation' pulse sequence or train is in the range of 5-50 seconds in duration and is at a frequency that can be in a range of from 10 to 100 Hz and wherein this also can be achieved in replications of 10 to 20Hz if or when needed.~~

26. (Currently Amended) An apparatus for causing neuron depolarization for ameliorating the effects of a mental disorder, the apparatus comprising:

A cap instrument configured to be placed in physical proximity to a human head, for comprising:

a plurality of coils arranged in rows on the cap configured to emit a sequence of pulses of a electromagnetic radiation when energized with electric current, wherein the pulses have a pulse frequency; and
an adjustment mechanism connected to the cap for adjusting the distance of the coils from the head for focusing the electromagnetic radiation into the head when the cap is worn by the head;

three congruent thyristor connections configured to consecutively or simultaneously operate to open and close power gap allotments;

an ultrasound attachment for generating ultrasonically induced electric fields within a brain;

wherein the pulses range from 50 microseconds to 400 microseconds in duration; and

~~A method wherein the electromagnetic animation pulses have a duration in the range of 50 to 400 microseconds, whether constant or varying systematically within said range whereas this method can replicate in variables of 10 in addition to being consistent with inclusion of 3 congruent thyristor connections set up in a sophisticated configuration which allows them to consecutively or simultaneously operate faster with the capacity to open and close power gap allotments at ranges and pulsation previously unavailable.~~

27. (Currently Amended) The apparatus of claim 2, wherein the coils comprise magnetic cores hemispherical in shape;

wherein the cores comprise magnetic material having a magnetic saturation of between 0.5 Tesla to 5 Tesla; and

wherein windings of wire are wrapped around at least a portion of the magnetic cores.

An electromagnetic animation generator comprising multiple magnetic cores being approximately hemispherical as in standard orientation, but also non-hemispherical in contour categories wherein utilitarian emissions need to be manifested so that electromagnetic fields differentiating in shape or form may be significantly more successful and said magnetic cores comprising magnetic material having a magnetic saturation of at least 0.5 Tesla and up to 5 Tesla, and having windings of wire around at least a portion of said magnetic cores. count being up to 100 plus, size being as small as one quarter to one half inch diameter can for the first time be integrated and installed to encompass as much as one quarter to one half of the "Thinking Cap" and allowing induction beams from coils themselves a range, latitude, longitude and distance resulting in potential for superior success in direct correlation to the numerous 'to target' advantage points.

28. (Cancelled)

29. (Currently Amended) A method for treatment of depression, attention deficit disorder, anxiety, obsessive compulsive disorder, dysthymia, memory loss, learning disorder as well as virtually all other possible emotional, and cognitive instabilities by directing a combination of electromagnetic radiation and ultrasound onto a specific area in the brain.

~~by utilization of the triple induction treatment method of electricity, magnetism and ultrasound which has a significantly higher accuracy ranch broader spectrum of lower power sources and induction beam variations considerably more attuned with the most complex irregularities of developing or fully developed brains.~~

30. (Currently Amended) The apparatus of claim 2, further comprising:

a power source for powering the apparatus; and
a modality shifter, configured for shifting the power source from a 10,000V
source to either a 9V source or a 12 V source, for switching between a low power
electromagnetic radiation state and high power electromagnetic radiation state.

~~A method of EBA treatment set forth whereas a modality shifter adaptation from high level power source (10,000V outlet) to an extra low level power source (9V to 12V mobile battery) is applicable due to an (Adaptor Modality Shifter) mechanism, a heretofore unavailable variation range in an all inclusive control board operational module connected directly to all possible, utilizable coil and ultrasound mechanisms within the whole of the EBA generator to variation ranges in all inclusive emission and conduction areas for non-invasive brain integration which now offers the capacity to both pass through the blood brain barrier and specify a target locale and size as small as one [1] centimeter.~~

31. – 33. (Cancelled)

34. (Currently Amended) The apparatus of claim 2, further comprising a switch for connecting the apparatus to a medical imaging scanner for targeting an area of the brain for treatment.

~~A method heretofore not available of manually operated electronic switching controls interconnected between primary electromagnetic brain animation generation and all multiple computer tomography, topography, PET, CT, and X-ray instrumentations allowing highest percentage specific coil transmissions into higher percentage specific locations on the basis of all the assuasive visual power sources being combined with all EBA power sources, united within the panel of the main EBA control board.~~

35. (Currently Amended) A method for non-invasive excitation of brain neurons of a person having a mental or emotional disorder, comprising:

projecting a combination of electromagnetic radiation and ultrasound pulses on to specific areas of a brain that known to impact or result in mental or emotional disorders;

wherein the ultrasound pulses are initiated from a cap configured to conform to a human head;

wherein the electromagnetic radiation is initiated from a plurality of coils connected to the cap, the electromagnetic radiation varying in time and intensity from the plurality of coils and focused on a plurality of locations in the cerebrum;

wherein the combination of electromagnetic radiation and ultrasound induce neuron depolarization for the purpose of rehabilitating the , and/or redirection of the mental or emotional disorder.

~~A method is set forth wherein "Double EBA" or "Triple EBA" induction or up to 50 EBA inductions refers to the versatile "Cap" coil abilities for allowing an equal number of~~

~~charged coil beams to be applied to equal number of differing cerebral locations with timing and intensity adjusted individually or in combinations within those two [2] through fifty [50] beam inductions, resulting in a significant innovative capacity for treatment of an equal and considerable number of different brain regions simultaneously.~~

36. - 37. (Cancelled)

38. (Currently Amended) An apparatus for inducing neuron depolarization, comprising:

a cap instrument configured to be placed in physical proximity to a human head, the cap instrument comprising:

a plurality of coils arranged in rows on the cap configured to emit electromagnetic radiation when energized with electric current, the coils encased in a plurality of plates disposed on top of the cap instrument; and

a plurality of hydraulically adjustable prongs connected to the cap for adjusting the distance of the coils from the head for focusing the electromagnetic radiation into the head when the cap is worn by the head.

~~A method for enhancing brain function by means of electromagnetic brain animation utilizing a "Cap" formulated structure suited Mth10 multi-directional mobility plates and a minimum of 5 incased coil formulations residing within these plates, which are rectangular in shape, point at top of "Cap _ instrument", opposite positioned larger part at bottom of "Cap instrument" with mobility consisting of being able to hydraulically rise from bottom edge straight up to where said plate is situated evenly and out from top of Cap container with each plate producing a minimum of 5 different angled, directed and beamed EBA induction ranges with two 2 plates providing a minimum of 10 varying~~

~~induction ranges and continuing with rise of another hydraulically lifted plate up to 50~~

~~different angled, directed and beamed EBA induction ranges.~~

39. (Currently Amended) A method of treating a mental illness, comprising:

applying an ultrasound beam to an affected area of the brain through a pathway;

applying electromagnetic pulses through the pathway targeting the affected area of the brain, the electromagnetic pulses initiated from a cap structure surrounding the brain and positioned a fixed distance from the brain;

wherein the method causes neuron depolarization at the affected area.

~~for originally manufactured ultrasonic coils which have numerous primary advantages not previously achieved such as being able to transmit induction through the 'blood brain barrier' [BBB] due to its considerably smaller molecular structure; allowing ultrasound to be used as a guide for which electricity and magnetism can follow through therefore, reaching neuron areas never previously reachable and having the additional capacity to specifically hit an area as small as 1 centimeter, further indicating ultrasound literally actually changing the paradigm for non invasive mental health~~